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EXAMINER	
PUNNOOSE, ROY M	

ART UNIT	PAPER NUMBER
2877	

DATE MAILED: 06/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/733,252	ZETTLER, JORG-THOMAS	
	Examiner	Art Unit	
	Roy M. Punnoose	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8,9 and 12-18* is/are rejected.

7)☒ Claim(s) *7,10 and 11* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 July 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/9/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Pre-Amendment

1. The pre-amendment filed by the applicant on July 23, 2004 is acknowledged and has been entered into the records.

Specification

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading.

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
(f) BACKGROUND OF THE INVENTION.
(1) Field of the Invention.
(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet and not more than 150 words).

Content of Specification

(a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.

(b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.

(c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.

(d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).

(e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.

(f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:

(1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."

(2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

(g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

(h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.

(i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

(j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, **each element or step of the claim should be separated by a line indentation.** There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

(k) Abstract of the Disclosure: See MPEP § 608.01(f). The abstract should be in narrative form and generally limited to a **single paragraph** on **a separate sheet** within the **range of 50 to 150 words.** It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.
The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The

disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The specification is objected to because several of the section headings (see list above) are missing. Appropriate correction is required.

4. The specification is objected to because claims 1 and 13 are used to summarize the claimed invention (see second paragraph on page 4 of the specification). Appropriate correction is required.

5. The abstract of the disclosure is objected to because it is presented in two paragraphs. Appropriate correction is required. See MPEP § 608.01(b).

Priority

6. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on December 12, 2002. It is noted, however, that applicant has **not filed** a certified copy of the German application as required by 35 U.S.C. 119(b).

Drawings

7. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "beam dividing polarizing prism" of claims 8 and 18 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing

should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

8. Claim 1 is objected to for the following informalities: The format of the claim 1 is objected to because each element or step of the claim should be separated by a line indentation. For improved clarity, the Examiner has re-formatted claim 1 as shown below, and the claim has been examined based on the below format:

1. A method for the determination of characteristic layer parameter by:

A. irradiation of light on to a layer structure;

B. determination of the temperature of the layer by means of at least one emissivity-corrected pyrometer;

C. spectral-optical measurement of the reflected light;

D. determination of the characteristic layer parameters;

wherein

a. the wobbling and/or rotating of the sample to be measured is compensated; and/or

b. that the pyrometer optical path and the optical path of the spectral-optical system are guided separately of each other;

and/or

c. that a separation of the radiation signal for the temperature measurement and the radiation signal for the spectral-optical measurement is implemented by blanking of the irradiated light.

9. Claim 1 is objected to because it recites the limitation "the wobbling and/or rotating" in line 8. There is insufficient antecedent basis for this limitation in the claim because there is no prior disclosure or recitation of this limitation in the claim.

10. Claim 1 is objected to because it recites the limitation "the sample" in line 8. There is insufficient antecedent basis for this limitation in the claim because there is no prior disclosure or recitation of this limitation in the claim.

11. Claim 1 is objected to because it recites the limitation "the radiation signal" in lines 14 and 15. There is insufficient antecedent basis for this limitation in the claim because there is no prior disclosure or recitation of this limitation in the claim.

12. Claim 1 is objected to because in the preamble it recites "determination of characteristic parameter" (parameter being singular) and in lines 5-6 it recites "determination of characteristic parameters" (parameters being plural). Appropriate correction is required.

13. Claim 4 is objected to because from the synchronized blanking of claim 4, it is not clear what the blanking of the irradiated light is synchronized to. For examination purposes, it is assumed that it is synchronized with respect to a sample mounted on the sample carrier as claimed in claim 9.

14. Claim 6 is objected to because it recites the limitation "the synchronisation" in line 4. There is insufficient antecedent basis for this limitation in the claim because there is no prior disclosure or recitation of this limitation in claim 6, or its parent claim.

15. Claim 6 is objected to because it recites the limitation "the sample carrier" in lines 5-6. There is insufficient antecedent basis for this limitation in the claim because there is no prior disclosure or recitation of this limitation in claim 6, or its parent claim.

16. Claim 7 is objected to because it recites the limitation "the radial temperature profile" and "the sample carrier" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim because there is no prior disclosure or recitation of this limitation in claim 7, or its parent claim.

17. Claim 9 is objected to because the recitation "sample perpendicular" in lines 5-6 and 7-8 are grammatically incorrect. Appropriate correction is required.

18. Claims 10 and 11 are objected to because it recites the limitation "the calculation" and "effective emissivity" in line 4 of each claim. There is insufficient antecedent basis for this limitation in the claims because there is no prior disclosure or recitation of these limitations in claims 10 and 11, or their parent claim.

19. Claim 11 is objected to because it recites the limitation "the sample holder" in line 10 and "the sample carrier" in line 11. There is insufficient antecedent basis for these limitations in the claim because there is no prior disclosure or recitation of this limitation in claim 11, or its parent claim.

20. Claim 13 is objected to for the following informalities: The format of the claim 13 is objected to because each element or step of the claim is not separated by a line indentation. For

improved clarity, the Examiner has re-formatted claim 13 as shown below, and the claim has been examined based on the below format:

13. An apparatus for the determination of characteristic layer parameters comprising:

A. a spectral-optical system;

B. at least one emissivity-corrected pyrometer; and,

C. analysis means;

comprising

a. means for compensation of the wobbling and/or the rotating of the sample;

b. and/or

c. means for blanking of the irradiated light.

21. Claim 17 is objected to because in the specification the applicant discloses that "use of several pyrometers is a very complex and cost intensive solution ..." (see page 2, last sentence of 2nd paragraph) and teaches against the use of several pyrometers, and then contradictorily claims this feature as part of applicant's claimed invention (see line 4 of claim 17). The question arises if this contradiction of the claimed subject matter in the specification and in the claim is unintentional and an oversight on the part of the applicant.

Claim Rejections - 35 USC § 112

22. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

23. Claims 1-6, 8-9, 13-16 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

24. Independent claims 1 and 13 are rejected for being vague and indefinite because with multiple use alternative "and/or" terminology in the respective claims, many combinations of limitations are possible and therefore the scopes of said claims are not clearly defined.

25. Dependent claims 2-3, 15, 16 and 18 are rejected because multiple use alternative "and/or" terminology in these dependent claims in addition to the multiple alternative "and/or" terminology in the parent claims has made the claims vague and indefinite. Many combinations of limitations are possible and therefore the scopes of said claims are not clearly defined.

Specifically with regard to claim 2, the multiple use alternative "and/or" terminology in the parent claim, claim 1, makes it possible not to have or include the wobbling compensation in claim 1. If the wobbling compensation is not included in claim 1, then it is not clear what the scope of the claim is. If the "rotating" limitation is included or excluded from the parent claim, it makes the claim even more complicated with respect to its scope.

26. Claims 4-6, 8-9 and 14 are rejected for reasons similar to the reasons for rejection of claim 2 above because the limitations claimed in these dependent claims may not be applicable if some of the possible combination of limitation(s) in the parent claims are included or excluded and therefore the scopes of said claims are not clearly defined.

27. Claim 8 is additionally rejected because with the "in case of" clause, if the "in case of" clause is true this claim is valid, and if the "in case of" clause is false then this claim becomes null and void. Therefore, because of the "in case of" clause, this claim has an indeterminate status with regard to the scope of the claim. Claim 8 has not been examined on its merits because of its indeterminate status.

Claim Rejections - 35 USC § 103

28. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

29. Claims 1, 12, 13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan et al (US_5,501,697) in view of Wei et al (US_6,608,689).

30. Claim 1 is rejected because:

A. Duncan et al (Duncan hereinafter) discloses a method comprising, irradiation of light on to a layer structure 110, determination of the temperature of the layer by means of at least one emissivity-corrected pyrometer 102 (see col.3, lines 30-33), spectral-optical measurement of the reflected light with an ellipsometer 105 and determination of the characteristic layer parameter such as the temperature of the wafer layer (see abstract, col.1, line 63- col.2, line 4), and that the pyrometer optical path and the optical path of the spectral-optical system are guided separately of each other (see Figure 1) for precise measurement of a sample parameter under the conditions of industrial growth or coating processes.

B. However Duncan doe not teach of compensating for wobble of the layer structure 110 for precise measurements of the sample parameter under the conditions of industrial growth or coating processes.

C. Wei et al (Wei hereinafter) teaches of compensating for wobble of the layer structure (see col.5, lines 7-23, and specifically lines 18-21, and Figure 6B) for precise measurements of a sample parameter in a manufacturing environment (see col.1 lines 30-35).

D. In view of Wei's teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Wei's teaching into Duncan's method due to the fact that such a wobble compensated measuring tool would improve accuracy and therefore provide more accurate measurements of the parameters of a layer structure to improve the quality of said structure in a manufacturing environment.

31. Claim 12 is rejected because Duncan discloses prior art teaching of carrying out spectral-optical measurement (by ellipsometry) using only one wavelength (see col.1, lines 45-50). In view of the prior art teaching of carrying out spectral-optical measurement using only one wavelength, it would have been obvious to one of ordinary skill in the art to incorporate that into Duncan's method due to the fact that a selected single wavelength may the emission wavelength of the coating or deposition material and therefore the optimum wavelength for the spectral-optical measurement of that specific material which in turn will improve the accuracy and therefore provide more accurate measurements of the parameters of a layer structure to improve the quality of said structure in a manufacturing environment.

32. Claim 13 is rejected because:

A. Duncan discloses an apparatus comprising a spectral-optical system 104, 105 (see Figure 1), at least one emissivity-corrected pyrometer (see col.3, lines 30-33), and an analysis means 106 for the determination of characteristic layer parameter for precise

measurement of a sample parameter under the conditions of industrial growth or coating processes.

B. However Duncan doe not teach of a means for compensating for wobble of the layer structure 110 for precise measurements of the sample parameter under the conditions of industrial growth or coating processes.

C. Wei et al (Wei hereinafter) teaches of a means for compensating for wobble of the layer structure (see col.5, lines 7-23, and specifically lines 18-21, and Figure 6B) for precise measurements of a sample parameter in a manufacturing environment (see col.1 lines 30-35).

D. In view of Wei's teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Wei's teaching into Duncan's apparatus due to the fact that such a wobble compensated measuring tool would improve accuracy and therefore provide more accurate measurements of the parameters of a layer structure to improve the quality of said structure in a manufacturing environment.

33. Claim 18 is rejected because:

A. Duncan teaches all the apparatus claim limitations except that the apparatus additionally comprises at least one beam splitter for directing a desired light beam in any selected direction for the determination of characteristic layer parameter for precise measurement of a sample parameter under the conditions of industrial growth or coating processes.

B. Wei teaches beam splitter (see beam splitter between detector 112 and lens 105 in Figure 6B) for directing a laser beam in the direction of a layered structure on a carrier 404 to compensate for the wobbling of the layered structure in the determination of

characteristic layer parameter for precise measurement of a sample parameter to improve accuracy and therefore provide more accurate measurements of the parameters of a layer structure to improve the quality of said structure in a manufacturing environment.

C. In view of Wei's teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Wei's teaching of the beamsplitter into Duncan's apparatus due to the fact that such a wobble compensated measuring tool would improve accuracy and therefore provide more accurate measurements of the parameters of a layer structure to improve the quality of said structure in a manufacturing environment.

34. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan et al (US_5,501,697) in view of Wei et al (US_6,608,689) and further in view of Pickering et al (US_6,362,881).

35. Claims 13 and 14 are rejected because:

A. Duncan and Wei teaches all claim limitations as disclosed above except that the apparatus comprises means for blanking of the irradiated light and that the means for blanking is a shutter for the purpose of controlling incident light on a sample such as a layered structure so that the sample can be illuminated at any desired time to optimize the accuracy of the measurements so that the characteristic layer parameters can be measured to determine the quality of said layered structure.

B. Pickering et al (Pickering hereinafter) discloses a means 9 (see Figure 1) for blanking of the irradiated light and that the means for blanking is a shutter 9 (see col.4, lines 15-16) for the purpose of controlling incident light on a sample such as a layered structure so

that the sample can be illuminated at any desired time to optimize the accuracy of the measurements so that the characteristic layer parameters can be measured to determine the quality of said layered structure.

C. In view of Pickering's teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Pickering's teaching of the shutter into Duncan's and Wei's apparatus due to the fact that the sample can be illuminated at any desired time to optimize the accuracy of the measurements so that the characteristic layer parameters can be measured to determine the quality of said layered structure in a manufacturing environment.

36. **Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan et al (US_5,501,697) in view of Wei et al (US_6,608,689) and further in view of Boguslavskiy et al (WO 02/26435 A1).**

37. Claim 17 is rejected because:

A. Duncan and Wei teaches all claim limitations as disclosed above except for the apparatus comprising several pyrometers arranged in different distances to the centre of a rotatable sample carrier.

B. Applicant discloses prior art teaching of Boguslavskiy et al (Boguslavskiy hereinafter) of an apparatus comprising several pyrometers 126, 136, 146, 138, 139 arranged in different distances to the centre of a rotatable sample carrier 110 (see abstract, page 6, lines 11-17 and Figure 3) to measure temperature of a semiconductor substrate at different points along the surface so that a profile of the surface temperature of the substrate can be

determined to more accurately measure the temperature of the substrate and thereby more accurately determine the quality of said substrate.

C. In view of Boguslavskiy's teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Boguslavskiy's teaching into Duncan's and Wei's apparatus due to the fact that several pyrometers arranged in different distances to the centre of a rotatable sample carrier to measure temperature of a layer structure at different points along the surface so that a profile of the surface temperature of the layer structure can be determined to more accurately measure the temperature of the substrate and thereby more accurately determine the quality of said substrate in a manufacturing environment.

Allowable Subject Matter

38. Claims 2-7, 9-11 and 15-16 have allowable subject matter.

39. Claims 2-7, 9-11 and 15-16 are objected to as being dependent upon a rejected base claim(s), but would be allowable if rewritten in independent form including **all** of the limitations of the base claim and any intervening claims, or, if the rejection of the base/parent claim(s) can be overcome.

40. In claim 2, the allowable subject matter is the compensation of the wobbling of the sample to be measured is implemented by a spherical mirror, where the sample is located in the centre of the curvature of the spherical mirror, in combination with the all the rest of the limitations of claim 1.

41. In claim 3, the allowable subject matter is the compensation of the wobbling of the sample to be measured is implemented by a lens, a beam splitter and an aperture, in combination with the all the rest of the limitations of claim 1.

42. In claim 4, the allowable subject matter is the separation of the radiation signal for the temperature measurement and the radiation signal for the spectral-optical measurement is implemented by synchronized blanking of the irradiated light, in combination with the all the rest of the limitations of claim 1.

43. In claim 5, the allowable subject matter is that a separation of the radiation signal for the temperature measurement and the radiation signal for the spectral-optical measurement is implemented by blanking of the irradiated light and the blanking is implemented by means of a shutter, in combination with the all the rest of the limitations of claim 1.

44. In claim 6, the allowable subject matter is that a separation of the radiation signal for the temperature measurement and the radiation signal for the spectral-optical measurement is implemented by blanking of the irradiated light and the synchronization of the blanking takes place with respect to the rotation of a sample mounted on the sample carrier, in combination with the all the rest of the limitations of claim 1.

45. In claim 7, the allowable subject matter is that a measurement of the radial temperature profile of the sample carrier takes place, in combination with the all the rest of the limitations of claim 1.

46. In claim 9, the allowable subject matter is that the angle of detection of the pyrometer is equal to the angle of incidence of the spectral-optical measurement, in combination with the all the rest of the limitations of claim 1.

47. In claim 10 and 11, the allowable subject matter is the claimed formulas for the effective emissivity, in combination with the all the rest of the limitations of claim 1.

48. In claim 15, the allowable subject matter is that the means for the compensation of the wobbling of the sample comprise a spherical mirror, where the sample is located in the centre of the curvature of the spherical mirror, in combination with the all the rest of the limitations of claim 1.

49. In claim 16, the allowable subject matter is that the means for the compensation of the wobbling of the sample comprises a lens, a beam splitter and an aperture, in combination with the all the rest of the limitations of claim 1.

Contact/Status Information

50. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Roy M. Punnoose** whose telephone number is **571-272-2427.** The examiner can normally be reached on 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Gregory J. Toatley, Jr.** can be reached on **571-272-2800 ext.77.** The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 30, 2006

Roy M. Punnoose
Patent Examiner
Art Unit 2877